WHAT IS CLAIMED IS:

1. A battery device comprising a plurality of batteries connected in series, each of the plurality of batteries comprising:

a bypass for functioning as a conductive path so that electricity detours around the battery; and

a switch for interrupting the flow of electricity into the battery above a maximum permissible temperature, and causing the electricity to flow through the bypass.

2. A battery device according to claim 1, wherein the bypass of each battery is connected to the switch of an adjacent battery.

3. A battery device according to claim 1, wherein the bypass is connected to an external circuit.

4. A battery device according to claim 1, wherein the switch comprises:

a first fixed contact connected to each of the plurality of batteries;

a second fixed contact connected to the bypass;

a thermally responsive element which is composed of a laminate of a plurality of metal plates having different thermal expansion coefficients, and has a free end that shifts between the first fixed contact and the second fixed contact; and

a movable contact which is provided at the free end of the thermally responsive element and is in contact with either the first fixed contact or the second fixed contact; and

wherein below the maximum permissible temperature, the movable contact is in contact with the first fixed contact, and above the maximum permissible temperature, the thermally responsive element is inverted such that the movable contact is in contact with the second fixed contact.

5. A battery device according to claim 2, wherein the switch comprises:

a first fixed contact connected to each of the plurality of batteries;

a second fixed contact connected to the bypass;

a thermally responsive element which is composed of a laminate of a plurality of metal plates having different thermal expansion coefficients, and has a free end that shifts between the first fixed contact and the second fixed contact; and

a movable contact which is provided at the free end of the thermally responsive element and is in contact with either the first fixed contact or the second fixed contact; and

wherein below the maximum permissible temperature, the movable contact is in contact with the first fixed contact, and above the maximum permissible temperature, the thermally responsive element is inverted such that the movable contact

is in contact with the second fixed contact.

6. A battery device according to claim 3, wherein the switch comprises:

a first fixed contact connected to each of the plurality of batteries;

a second fixed contact connected to the bypass;

a thermally responsive element which is composed of a laminate of a plurality of metal plates having different thermal expansion coefficients, and has a free end that shifts between the first fixed contact and the second fixed contact; and

a movable contact which is provided at the free end of the thermally responsive element and is in contact with either the first fixed contact or the second fixed contact; and

wherein below the maximum permissible temperature, the movable contact is in contact with the first fixed contact, and above the maximum permissible temperature, the thermally responsive element is inverted such that the movable contact is in contact with the second fixed contact.

7. A battery device according to claim 4, wherein the movable contact is fixed to the free end of the thermally responsive element and includes a portion protruding toward the first fixed contact and a portion protruding toward the second fixed contact.

8. A battery device according to claim 5, wherein the movable contact is fixed to the free end of the thermally responsive element and includes a portion protruding toward the first fixed contact and a portion protruding toward the second fixed contact.

9. A battery device according to claim 6, wherein the movable contact is fixed to the free end of the thermally responsive element and includes a portion protruding toward the first fixed contact and a portion protruding toward the second fixed contact.